L20 ANSWER 1 OF 1 CA COPYRIGHT 2009 ACS on STN
AN 132:5633 CA
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TI Producing portland cement from iron and steel slags and limestone
AU Monshi, A.; Asgarani, M. K.
CS Department of Materials, University of Technology, Esfahan, Iran
SO Cement and Concrete Research (1999), 29(9), 1373-1377
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PB Elsevier Science Ltd.
DT Journal
LA English
CC 58-1 (Cement, Concrete, and Related Building Materials)
Section cross-reference(s): 60
AB The slags from blast furnace (iron-making) and converter (steel-making), after magnetic separation, are mixed with limestone of six different compns. The ground materials are fired in a pilot plant scale rotary kiln to 1350 °C for 1 h. The clinker is cooled, crushed, mixed with 3% gypsum, and ground to fineness of more than 3300 cm2/g. Initial and final setting times, consistency of standard paste, soundness, free CaO, and compressive and fracture strengths after 3, 7, and 28 days are measured. Samples with higher lime saturation factor developed higher C3S content and better mech. properties. Blending 10% extra iron slag to a cement composed of 49% iron slag, 43% calcined lime, and 8% steel slag kept the compressive strength of concrete above standard values for type I ordinary portland cement.
ST portland cement manuf iron steel slag limestone raw material
IT Slags
(blast-furnace; producing portland cement from iron- and steel-making slags and limestone)
IT Cement (construction material)
(portland; producing portland cement from iron- and steel-making slags and limestone)
IT Compressive strength
Raw materials
Recycling
(producing portland cement from iron- and steel-making slags and limestone)
IT Limestone, uses
RL: NUU (Other use, unclassified); TEM (Technical or engineered material use); USES (Uses)
(raw material; producing portland cement from iron- and steel-making slags and limestone)
IT Slags
(steelmaking, converter; producing portland cement from iron- and steel-making slags and limestone)
IT 12168-85-3, c3s Cement component
RL: TEM (Technical or engineered material use); USES (Uses)
(content; producing portland cement from iron- and steel-making slags and limestone)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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